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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,169	12/11/2003	Peiguang Zhou	KCX-652 (18776)	5949
22827	7590	03/25/2008		
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			EXAMINER COLE, ELIZABETH M	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 03/25/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,169

Applicant(s)

ZHOU ET AL.

Examiner

Elizabeth M. Cole

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 9-11, 13-16, 19, 20, 32-34, 37-40, 54, 55, 61 and 64-91 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12, 17, 18, 21-31, 35, 36, 41-53, 56-60, 62, 63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. In view of the appeal brief filed on 12/26/07 PROSECUTION IS HEREBY REOPENED. A new rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7, 12, 18, 21-22, 26, 29, 35-36, 43-44, 47, 48, 50-51, 53, 56-57, 62 are rejected under 35 U.S.C. 103 (a) as being obvious over WO 93/02610 in view of EP 1,212,974. WO 93/02610 discloses a cleaning material comprising a plurality of plies of

absorbent substrates which are stacked and separated from each other by plastic sheets. See Page 3, lines 7-39; page 4, lines 1-5 and figures. The separate absorbent layers can be individually removed by pulling by a user and therefore they are releasably attached. The layers are absorbent and can be made of tissue paper or other natural or synthetic absorbent materials. See page 5, lines 1-4. WO '610 differs from the claimed invention because it does not teach that the stacked, releasably attached absorbent structures further comprise an abrasive layer and does not teach the addition of cleaning elements, the use of stitching as the means of releasably attaching the plies or the presence of perforations in the structure. EP '974 discloses a scrubbing sheet comprising an absorbent material and a plurality of plies of a scrubbing material. The plies may be stitched to the absorbent material. The absorbent material can comprise nonwovens and papers and can be formed from natural or synthetic fibers. EP '974 teaches that cleaning sheets which comprise a plurality of nonwoven layers can comprise meltblown webs, coforms, spunbondeds, carded web, as well as air laid and wet laid webs. Cellulosic layers can be used as the cleaning layers, while synthetic polymers can form the scrubbing layers. See paragraphs 0011 – 0026. EP '974 teaches that besides heat and adhesive bonding that stitching can also be used to bond the layers of the cleaning sheet together. See paragraph 0026. The cleaning sheet can comprise various additives such as cleansers, skin conditioners, etc. See paragraphs 0027-0039. The scrubbing layers can be reversibly attached to the absorbent layers and can be superimposed on each other or on different sides of the absorbent layer. See paragraph 0025-0026. Perforations would necessarily be present in the layers due

to the stitching which would form holes due to the needle passing through the layers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added an abrasive synthetic polymer layer to some or all of the absorbent plies of WO '610 as taught by EP '974, with the expectation that this would further enhance the cleaning and scrubbing properties of the cleaning material. It further would have been obvious to have employed stitching as the means of releasably securing the plies together, since EP '974 teaches that this is a means of securing plies in an absorbent structure and to have added the particular cleaning and conditioning components taught by EP '974, in view of their suitability for the intended purpose. With regard to claim 29, which claims a substrate around which the plies of absorbent and abrasive materials are wrapped, official notice is taken that it is known in the art to wrap plies of cleaning sheets in roll form, for example as in rolls of paper towels, baby wipes, etc. .

3. Claims 5-6, 23-25, 27-28, 30-31, 41-46, 52, 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/02610 in view of EP 121974 as set forth above, and further in view of Prodoehl et al, US Patent Application Publication 2003/0029895 and Zafiroglu, U.S. Patent No. 4,704,321. WO '610 and EP '974 disclose a cleaning sheet as set forth above. WO '610 differs from the claimed invention because it does not disclose stitching at the periphery, although it does disclose joining the layers at the edges or periphery, and does not disclose the claimed basis weights and fiber size of the layers. Prodoehl discloses a cleaning sheeting comprising an absorbent core layer which may comprise multiple plies of a material

such as cellulosic fibers and which may have a basis weight of 100-2000 gsm. The fibers can have a high surface area. See paragraphs 0035 –0045. A scrubbing layer is disposed on the absorbent core layer. The scrubbing layer can comprise a plurality of plies of material and can comprise fibers having a diameter of 0.1-1 mm and a basis weight of 7-120 gsm. See paragraphs 0025 – 0039. The layers can be stitched at the periphery. See paragraph 0070. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the particular types of fibers for the absorbent and scrubbing layers as taught by Prodoehl, as well as the basis weights and stitching configuration, motivated by the teaching of Prodoehl, that these elements were useful in forming scrubbing implements having an absorbent core. With regard to the limitation that the thread is an elastic thread, while both references teach stitching the layers to bond them, both are also silent as to the particular type of thread to employ to stitch the layer. However, Zafiroglu teaches that it was known in the art to use elastic thread nonwoven absorbent layers for use as wipes. See abstract. Therefore, it would have been obvious to one of ordinary skill in the art to have employed the elastic thread taught by Zafiroglu to perform the stitching, in view of the art recognized suitability of elastic threads for the purpose of stitching wipes. Further, it is noted that the prior art references establish that the use of elastic thread to stitch wipes was known in the art and therefore, the known elastic thread could have been combined with the structure of WO '610 with a predictable result.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/02610 in view of EP 121974 as set forth above, and further in view of EP 0066463.

Art Unit: 1794

EP '974 and WO '610 disclose a cleaning sheet as set forth above. Neither WO '610 nor EP '974 teach aperturing the sheet. EP '463 discloses a cleaning sheet comprising a plurality of plies of cellulosic material. An interlayer of an impermeable film can be placed between the cellulosic plies. See page 4, lines 32-34; page 5, lines 22-32. The layers can be joined by bonding. See page 8, lines 1-19. The plies of cellulosic material comprise a plurality of perforations. The perforations have a size of 0.01-1.2 mm. The perforations are distributed at a rate of 0.5-5 perforations per square centimeter. See page 9, lines 1-13. The apertures can extend through less than the entire thickness of the cleaning sheet. See page 6, lines 9-12. The perforations can extend from one or both sides of the cleaning sheet. See page 8, lines 28-32. One side of the cleaning sheet can comprise a plurality of abrasive structures such as fibers which are bonded to one of the cellulosic plies. Suitable materials for the abrasive fibers include polystyrene, polymethyl methacrylate and polyvinyl chloride. See page 10, lines 15-26. The cleaning sheet may be impregnated with various additives such as soap, detergent, disinfectants, skin treatments, etc. See page 3, lines 11-16. The size and depth of the perforations can be controlled to allow for a metered release of the added components. See page 3, lines 17-23. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added perforation to the sheets of WO '610 and EP '974, motivated by the teaching of EP '463 that this would allow the additives such as detergents, etc., to be released from the cleaning sheet in a metered dose.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1794

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-8, 12, 17-18, 21-31, 35-36, 46-46, 41-53, 56-60, 62-63 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of copending Application No. 10/745,327 in view of WO 93/02610 because each discloses a wiping product comprising a plurality of plies wherein some of the plies comprise cellulosic pulp fibers and some comprise scrubbing layers. While US '327 teaches a plurality of scrubbing and absorbent plies, it does not teach forming them in a stack of alternating scrubbing and absorbent plies. WO '610 each teaches that disposable cleaning sheets can comprise a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of plies of the structures comprising the abrasive elements and the absorbent elements, motivated by the teaching of WO '610 that doing so provides a cleaning sheet which is renewable and which can provide multiple cleaning surfaces having different properties or cleansers impregnated therein.

Art Unit: 1794

7. This is a provisional obviousness-type double patenting rejection.

8. Claims 1-8, 12, 17-18, 21-31, 35-36, 46-46, 41-53, 56-60, 62-63 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-64 of copending Application No. 10/733,162 because each discloses a scrubbing product comprising a plurality of plies some of which have abrasive properties and some of which are absorbent. While US '162 teaches a plurality of scrubbing and absorbent plies, it does not teach forming them in a stack of alternating scrubbing and absorbent plies. WO '610 each teaches that disposable cleaning sheets can comprise a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of plies of the structures comprising the abrasive elements and the absorbent elements, motivated by the teaching of WO '610 that doing so provides a cleaning sheet which is renewable and which can provide multiple cleaning surfaces having different properties or cleansers impregnated therein.

9. This is a provisional obviousness-type double patenting rejection.

10. Claims 1-8, 12, 17-18, 21-31, 35-36, 46-46, 41-53, 56-60, 62-63 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-131 of copending Application No. 10/321,831 because each discloses a cleaning sheet comprising a plurality of plies including an abrasive layer and cellulosic layers. While US '831 teaches a plurality of scrubbing and

Art Unit: 1794

absorbent plies, it does not teach forming them in a stack of alternating scrubbing and absorbent plies. WO '610 each teaches that disposable cleaning sheets can comprise a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of plies of the structures comprising the abrasive elements and the absorbent elements, motivated by the teaching of WO '610 that doing so provides a cleaning sheet which is renewable and which can provide multiple cleaning surfaces having different properties or cleansers impregnated therein.

11. This is a provisional obviousness-type double patenting rejection.

12. Claims 1-8, 12, 17-18, 21-31, 35-36, 46-46, 41-53, 56-60, 62-63 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-220 of copending Application No. 10/322,277 in view of EP '463 and WO '610 because each discloses a scrubbing product comprising an abrasive layer and an absorbent layer wherein the absorbent layer can be a cellulosic web. US '277 differs from the claimed invention because it does not teach perforating the layers. EP '463 teaches that perforating the plies of a wiping sheet allows for the controlled release of additives such as detergents, etc. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have perforated the layers of US '277 motivated by the expectation that this would allow the controlled release of additives such as detergents, etc., which are added to the wiping sheet.

While US '277 teaches a plurality of scrubbing and absorbent plies, it does not teach forming them in a stack of alternating scrubbing and absorbent plies. WO '610 each teaches that disposable cleaning sheets can comprise a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of plies of the structures comprising the abrasive elements and the absorbent elements, motivated by the teaching of WO '610 that doing so provides a cleaning sheet which is renewable and which can provide multiple cleaning surfaces having different properties or cleansers impregnated therein.

This is a provisional obviousness-type double patenting rejection.

13. Claims 1-8, 12, 17-18, 21-31, 35-36, 46-46, 41-53, 56-60, 62-63 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-132 of copending Application No. 10/036,736 because each discloses an absorbent material comprising a plurality of plies of tissue paper. While US '736 teaches a plurality of scrubbing and absorbent plies, it does not teach forming them in a stack of alternating scrubbing and absorbent plies. WO '610 each teaches that disposable cleaning sheets can comprise a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of plies of the

Art Unit: 1794

structures comprising the abrasive elements and the absorbent elements, motivated by the teaching of WO '610 that doing so provides a cleaning sheet which is renewable and which can provide multiple cleaning surfaces having different properties or cleansers impregnated therein.

14. This is a provisional obviousness-type double patenting rejection.

15. Applicant's arguments filed 12/26/07 have been fully considered but they are not persuasive. Applicant argues that one of ordinary skill in the art would not have been motivated to combine the teachings of EP 1,212,974 and WO 93/02610 because EP '974 is directed to a material intended for limited number of uses, while WO '610 teaches a disposable wash cloth wherein a used layer can be removed after use to expose a fresh layer. However, both references are concerned with cleaning sheets which can be used a limited number of times, in that they are disposable implements which are not intended to be washed and re-used. EP '974 is concerned with providing a hygienic cleaning implement which does harbor remnants of food and other contaminants, as is often the case with sponges, dish towels, etc. WO '974 is also directed to a cleaning implement which a stacked array of discrete cleaning sheets wherein sheets can be removed from the stack after use to expose a new cleaning sheet. The person of ordinary skill in the art would have been motivated to combine the teachings of the two references in order to provide a cleaning sheet which, while still disposable, can be used several times, without re using the same cleaning sheet. WO '610 also teaches that this allows different types of cleansers to be separated for use at

separate times during cleaning, which provides further motivation to combine the teachings of WO '610 and EP '974.

16. Further, it is noted that the rejection as now formulated employs WO '610 as the primary reference and relies on EP '974 for the teaching that abrasive layers can be added to absorbent layers in order to form materials which have enhanced scrubbing abilities on one side. The addition of the abrasive layers on one side of the absorbent layers of WO '610 as taught by EP '974 would result in the claimed alternating structure.

17. With regard to claim 29, which claims a substrate around which the plies of absorbent and abrasive materials are wrapped, official notice is taken that it is known in the art to wrap plies of cleaning sheets in roll form, for example as in rolls of paper towels, baby wipes, etc.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Ms. Rena Dye, the examiner's supervisor, may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 1794

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c.

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794